

#### Weston Solutions, Inc.

Suite 201 1090 King Georges Post Road Edison, New Jersey 08837-3703 732-585-4400 • Fax: 732-225-7037 www.westonsolutions.com

#### The Trusted Integrator for Sustainable Solutions

REMOVAL SUPPORT TEAM 3 EPA CONTRACT EP-S2-14-01

December 4, 2014

Mr. Angel Rodriguez, On-Scene Coordinator U.S. Environmental Protection Agency Response and Prevention Branch Caribbean Environmental Protection Division, Region II 1492 Peñuelas De Leon Ave., Suite 417 San Juan, PR 00907-4127

EPA CONTRACT No.: EP-S2-14-01

TDD No.: TO-0001-0005

**DOCUMENT CONTROL No.: RST3-01-D-0077** 

SUBJECT: PERSONAL AIR SAMPLING TRIP REPORT – PUERTO RICO OLEFINS

ASBESTOS SITE, PEÑUELAS, PUERTO RICO

Dear Mr. Rodriguez,

Enclosed please find the Personal Air Sampling Trip Report for the air sampling activities conducted from September 30, 2014 through October 23, 2014 at the Puerto Rico Olefins Asbestos Site located in Peñuelas, Puerto Rico. If you have any questions or comments please do not hesitate to contact me at (787) 354-2489.

Sincerely,

Weston Solutions, Inc.

Carlos Huertas

RST 3 Site Project Manager

Enclosure

cc: TDD File No.: TO-0001-0005

### PERSONAL AIR SAMPLING TRIP REPORT PUERTO RICO OLEFINS ASBESTOS SITE PEÑUELAS, PUERTO RICO

#### **Prepared for:**

U.S. Environmental Protection Agency Region II – Response and Prevention Branch Edison, New Jersey 08837

#### Prepared by:

Removal Support Team 3 Weston Solutions, Inc. East Division Edison, New Jersey 08837

DC No.: RST3-01-D-0077 TDD No.: TO-0001-0005 EPA Contract No.: EP-S2-14-01

## TABLE OF CONTENTS

		rage	•
1	SITE LOCAT	ΓΙΟΝ 1	
2	SAMPLE DE	SCRIPTIONS 1	
3	LABORATO	RY RECEIVING SAMPLES 1	
4	SAMPLE DIS	SPATCH DATA1	
5	PERSONNEI		
6	SITE BACKO	GROUND2	1
7	PERSONAL .	AIR SAMPLING SUMMARY5	,
8	ANALYTICA	AL DISCUSSION5	,
		LIST OF ATTACHMENTS	
ATTA	CHMENT A:	Figure 1: Site Location Map Figure 2: Sample Location Map	
ATTA(	CHMENT B:	Table 1: Sample Collection Information and PCM Validated Analytical Data Summary	
		Table 2: Sample Collection Information and TEM Validated Analytical Data Summary	
ATTA	CHMENT C:	Chain of Custody Records and FedEx Airbills	
ATTA	CHMENT D:	Personal Air Sampling Data Validation Memorandum	

#### PERSONAL AIR SAMPLING TRIP REPORT

**SITE NAME:** Puerto Rico Olefins Asbestos Site

**DC No.:** RST3-01-D-0077 **TDD No.:** TO-0001-0005

**SAMPLING DATES:** September 30, 2014 through October 23, 2014

**1. Site Location:** Peñuelas, Puerto Rico

Refer to Attachment A, Figure 1: Site Location Map

2. Sample Descriptions: A total of air samples, including three field blanks and one lot

blank. Refer to Attachment A, Figure 2: Sample Location Map and Attachment B, Table 1: Sample Collection Information and PCM Validated Analytical Data Summary and Table 2: Sample Collection Information and TEM Validated Analytical Data

Summary.

#### 3. Laboratory Receiving Samples:

Lab Name/Location	Sample Type	Parameters
Batta Laboratories 6 Garfield Way Newark, DE 19713	Air	Asbestos PCM - NIOSH 7400 Asbestos TEM - NIOSH 7402

#### 4. Sample Dispatch Data:

On October 2, 2014, Weston Solutions Inc., Removal Support Team 3 (RST 3) shipped eight air samples, including one field blank and one lot blank, under Chain of Custody (COC) Record Number (No.) 2-1002014-00010005-0001 and FedEx Airbill No. 800093579235. On October 13, 2014, RST 3 shipped two air samples, including one field blank, under COC No. 2-101314-00010005-0001 and FedEx Airbill No. 800093579268. On October 23, 2014, RST 3 shipped two air samples, including one field blank, under COC No. 2-102314-00010005-0001 and FedEx Airbill No. 800093579279.

All samples were submitted to Batta Laboratories located in Newark, Delaware for asbestos analysis. Refer to Attachment C for Chain of Custody Records and FedEx Airbills.

#### 5. Personnel On Site:

<u>Name</u>	<b>Representing</b>	<b>Duties On-Site</b>
Carlos Huertas	RST 3, Region II	Site Project Manager, Field Coordinator,
		Site Health and Safety, Sample Collection
		and Sample Management
Angel Alicea	RST 3, Region II	Sample Collection and Sample Management

#### 6. Site Background:

The Puerto Rico Olefins Asbestos Site (the Site) is located at Road 385, KM 5.4, Tallaboa, Poniente Peñuelas, Puerto Rico. During a visual inspection, the U.S. Environmental Protection Agency (EPA) identified fugitive dust clouds migrating out of the facility during demolition activities conducted by HOMECA Inc. Beginning in 2010 and continuing until the present, an asbestos abatement occurred at the Site. Improper asbestos abatement techniques may have been used at the Site resulting in potential asbestos contamination throughout the Site and in residential neighborhoods downwind of the Site.

On November 21, 2013, as part of Phase I of the Removal Assessment, the EPA On-Scene Coordinator (OSC), EPA Air Program representative, and Weston Solutions, Inc., Removal Support Team 2 (RST 2) (currently RST 3) mobilized to the Site to perform multi-media sampling. As directed by the EPA OSC, RST 2 collected five bulk samples, including one field duplicate, four soil samples, including one field duplicate, and 10 wipe samples, including one wipe blank. Bulk samples were collected and submitted for asbestos analysis via EPA 600/R-93/116 Method using Polarized Light Microscopy (PLM). Soil samples were collected and submitted for asbestos analysis via modified EPA 600/R-93/116 Method using Transmission Electron Microscopy (TEM) with California Air Resource Board (CARB) 435 prep. Wipe samples were collected and submitted for asbestos analysis via American Society for Testing Materials (ASTM) 6480-05 Method. Samples were collected from outside areas where suspected asbestos contamination may have occurred and inside areas where asbestos may have entered the building.

On December 13, 2013, as part of Phase I of the Removal Assessment, the EPA OSC and RST 2 remobilized to the Site to collect two additional bulk samples. The additional bulk samples were collected from two specific locations as directed by the EPA OSC. The two bulk samples were collected and submitted for asbestos analysis via EPA 600/R-93/116 Method using PLM. Samples were collected from outside areas where suspected asbestos contamination may have occurred.

Based on the validated analytical results of the samples collected as part of Phase I of the Removal Assessment, asbestos was detected in bulk samples ranging from non-detect to 40 percent (%) amosite and 20% chrysotile, in soil samples ranging from 3 amosite/chrysotile asbestos structures to 9 amosite/chrysotile asbestos structures, and in wipe samples ranging from 7,760 structures per square centimeter (str/cm²) to 374,000 str/cm². The two additional bulk samples collected on December 13, 2013 were both non-detect for asbestos. The wipe blank sample was non-detect for asbestos.

On December 4 and 5, 2013, as part of Phase II of the Removal Assessment, the EPA OSC and RST 2 mobilized to the Jorge Lucas Perez Valdivieso School, located approximately 0.25 miles south of the Site, to conduct air sampling activities within classrooms identified by the EPA OSC. The school is separated into two areas referred to be RST 2 as Area 1 and Area 2. The two separate areas are separated by a road way. As directed by the EPA OSC, RST 2 established three air sampling stations within eight of the schools classrooms (CR01 through CR08). Air samples were collected from each of the established air sampling stations within each classroom but per the request of the EPA OSC only one of the air samples from each of the classrooms was submitted for asbestos analysis.

On December 5, 2013, as part of Phase II of the Removal Assessment, RST 2 shipped 11 air samples, including two lot blanks and one field blank, to the EMSL Analytical, Inc. laboratory for asbestos analysis via Method ISO 10312 - International Standard for the Determination of Asbestos Fibers - Direct Transfer. Per the request of the EPA OSC, on December 13, 2013, RST 2 shipped the additional two air samples collected on December 4, 2013 from classroom CR01 to the EMSL Analytical, Inc. laboratory for asbestos analysis via Method ISO 10312 - International Standard for the Determination of Asbestos Fibers - Direct Transfer.

Based on the validated analytical results of the samples collected as part of Phase II of the Removal Assessment, chrysotile asbestos was detected in eight of the 10 field air samples submitted for asbestos analysis. The total number of asbestos structures in the positive detections ranged between 2 and 25. The reported concentrations in the positive detections ranged between 0.0004 structures per cubic centimeter (s/cc) and 0.0032 s/cc.

On December 12 and 13, 2013, as part of Phase IIIA of the Removal Assessment, the EPA OSC and RST 2 mobilized to the Jorge Lucas Perez Valdivieso School to perform wipe sampling within the classrooms of the school. The areas identified in each classroom to be sampled were the entrance, near a window, and the dustiest area in the room. A total of 90 wipe samples, including five field blanks and one lot blank, were collected from 28 classrooms (CR01 through CR29, excluding CR27). Classroom CR27 and some other general areas of the school were not sampled due to the fact that the areas were not accessible or as directed by the EPA OSC. Wipe samples were collected and submitted for asbestos analysis via ASTM 6480-05 Method.

Based on the validated analytical results of the samples collected as part of Phase IIIA of the Removal Assessment, asbestos was detected in wipe samples ranging from non-detect to 363,000 str/cm<sup>2</sup>. The wipe blank samples were non-detect for asbestos.

On December 17 through 19, 2013, as part of Phase IIIB of the Removal Assessment, the EPA OSC and RST 2 mobilized to the Tallaboa Encarnacion Community to perform wipe sampling on the exterior of several properties. As directed by the EPA OSC, the area identified to be sampled had to be exposed to ambient air, but not exposed to rain or had not been cleaned recently. A total of 27 wipe samples, including two field blanks, were collected from 24 properties (P0005 through P0028). Wipe samples were collected and submitted for asbestos analysis via ASTM 6480-05 Method.

Based on the validated analytical results of the samples collected as part of Phase IIIB of the Removal Assessment, asbestos was detected in wipe samples from non-detect to 32,200,000 str/cm<sup>2</sup>. The wipe blank samples were non-detect for asbestos.

On January 2 and 3, 2014, as part of Phase IIIC of the Removal Assessment, the EPA OSC, RST 2, and the Puerto Rico Environmental Quality Board (EQB) mobilized to background locations, selected by the EPA OSC, at different distances and directions from the Site. As directed by the EPA OSC, the area identified to be sampled had to be exposed to ambient air, but not exposed to rain or have not been cleaned recently. A total of 13 wipe samples, including one field blank, were collected from 12 properties (P0029 through P0040). Properties P0029 through P0032 were located over five miles northwest of the Site;

properties P0033 through P0036 were located over one mile north of the Site; and properties P0037 through P0040 were located over two miles southeast of the Site. Wipe samples were collected and submitted for asbestos analysis via ASTM 6480-05 Method.

Based on the validated analytical results of the samples collected as part of Phase IIIC of the Removal Assessment, asbestos was detected in wipe samples ranging from non-detect to 160,000 str/cm<sup>2</sup>. The wipe blank sample was non-detect for asbestos.

On January 9, 2014, as part of Phase IIID of the Removal Assessment, the EPA OSC and RST 2 mobilized to the Head Start Encarnacion School (property P0014) to perform wipe sampling activities within the school. As directed by the EPA OSC, RST 2 collected five wipe samples from inside the classroom. The areas identified in each classroom to be sampled were the entrance, near a window, the dustiest area in the room, and two other high use areas. A total of five wipe samples were collected from property P0014. Wipe samples were collected and submitted for asbestos analysis via ASTM 6480-05 Method.

Based on the validated analytical results of the samples collected as part of Phase IIID of the Removal Assessment, asbestos was detected in wipe samples ranging from 2,910 str/cm<sup>2</sup> to 41,700 str/cm<sup>2</sup>.

From March 4 through 27, 2014, as part of Phase IV of the Removal Assessment, the EPA OSC and RST 2 mobilized to the Tallaboa Encarnación area in Peñuelas, Puerto Rico to perform indoor air and micro vac sampling activities at 32 residential/commercial properties (property P0008 is considered two separate properties) located within 0.25 miles of the Site. Air samples were submitted for asbestos analysis via phase contrast microscopy (PCM) Method [National Institute for Occupational Safety and Health (NIOSH) 7400] and TEM Method (NIOSH 7402), and/or ISO Method 13794:199(E). Micro vac samples were submitted for asbestos analysis via ASTM Method D-5755-09.

Based on the validated PCM analytical results of the air samples collected as part of Phase IV of the Removal Assessment, asbestos was detected in each property sampled at concentrations ranging from <0.001 fibers per cubic centimeter (F/cc) to 0.02 F/cc. Six properties sampled were not able to be run for PCM analysis due to the cassettes being overloaded with particulates.

Based on the validated TEM analytical results of the air samples collected as part of Phase IV of the Removal Assessment, chrysotile, anthophyllite, actinolite, or tremolite asbestos fibers were detected in 16 of the 32 properties sampled. The reported concentrations in the positive detections ranged between 0.00018 s/cc to 0.5299 s/cc. In addition, six properties (including the separated property P0008) contained asbestos concentrations which exceeded the Site-Specific Action Levels of 0.0009 s/cc for residential properties and 0.002 s/cc for commercial properties.

Based on the validated TEM analytical results of the micro vac samples collected as part of Phase IV of the Removal Assessment, chrysotile, actinolite, or amosite asbestos fibers were detected in 26 of the 32 properties sampled. The reported concentrations in the positive detections ranged between 231.3 s/cm² to 12,782,000.0 s/cm². In addition, 13 properties (including the separated property P0008) contained asbestos concentrations which exceeded the Site-Specific Action Levels of 5,000 s/cm².

In April 2014, the potentially responsible party (PRP) initiated Removal Actions at the Jorge Lucas Perez Valdivieso School and the Head Start Encarnacion School. The Removal Actions were completed in August 2014.

#### 7. Personal Air Sampling Summary:

From September 30, 2014 through October 23, 2014, RST 3 mobilized to the Site (property P0001) to provide maintenance to the DUSTTRAK<sup>TM</sup> units installed on the Site. Personal air samples were collected to determine personal exposure within the Contamination Reduction Zone (CRZ) where the DUSTTRAK<sup>TM</sup> units are installed. A total of 12 personal air samples, including three field blanks and one lot blank, were collected and submitted for asbestos analysis by NIOSH Method 7400 (PCM) and Method 7402 (TEM).

Air samples were collected utilizing GilAir Plus air sampling pumps. A volume of approximately 500 liters was collected, for each sample at the rate of 2.0 to 3.0 liters per minute (L/min) for 3 to 4 hours to achieve 0.005 F/cc reporting limit as determined by the EPA. Sample pumps were calibrated in the Support Zone utilizing a BIOS DryCal and a clean sample cartridge of the same type as that used during sample collection. All air samples were collected in accordance with EPA Environmental Response Team (ERT) Standard Operating Procedure (SOP) Nos. 2008 and 2015.

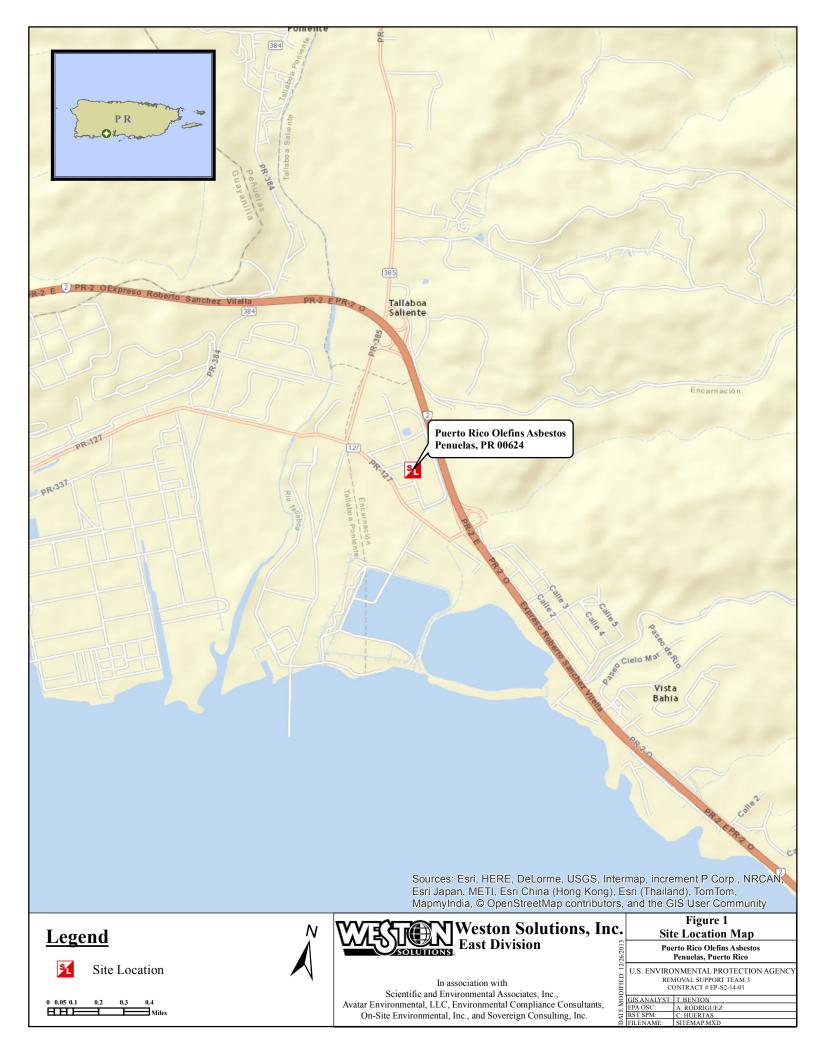
#### 8. Analytical Discussion:

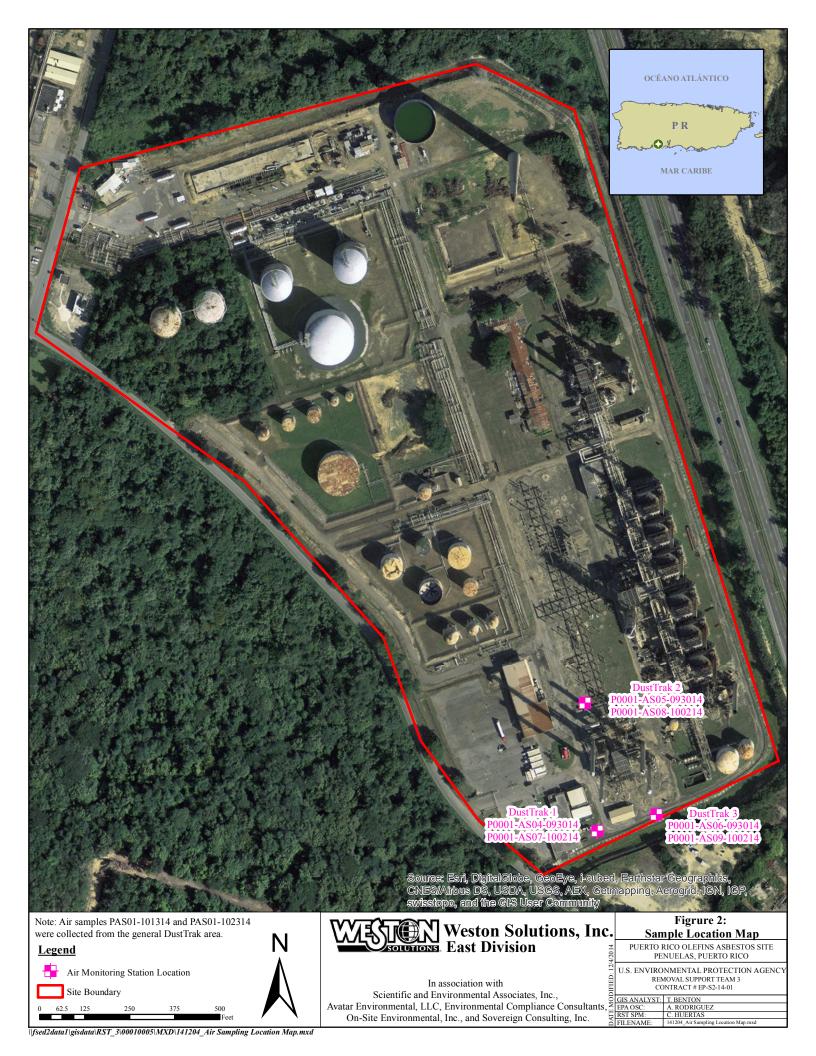
Based on the asbestos PCM validated analytical results of the samples collected as part of personal air monitoring sampling event, asbestos was detected in two of the eight field samples at a concentration of 0.006 F/cc; however, asbestos was not detected and any of the samples at concentrations exceeding the Site-Specific Action level of 0.1 F/cc. Based on the asbestos TEM validated analytical results, all samples were non-detect for asbestos. Refer to Attachment B, Table 1: Sample Collection Information and PCM Validated Analytical Data Summary; Table 2: Sample Collection Information and TEM Validated Analytical Data Summary; and Attachment D Personal Air Sampling Data Validation Memorandum.

Report prepared by:	Carlos Huertas RST 3 Site Project Manager	Date:	12/4/2014
Report reviewed by:	Timothy Benton RST 3 Operations Manager	Date:	12/4/2014

## **ATTACHMENT A**

Figure 1: Site Location Map Figure 2: Sample Location Map





### **ATTACHMENT B**

Table 1: Sample Collection Information and PCM Validated Analytical Data Summary Table 2: Sample Collection Information and TEM Validated Analytical Data Summary

# Table 1: Sample Collection Information and PCM Validated Analytical Data Summary Puerto Rico Olefins Asbestos Site Peñuelas, Puerto Rico September 30, 2014 through October 23, 2014

	Sample	Sample	Sample	35				Test Results	Test Results
Sample #	Location	Date	Time	Matrix	Analysis	Sample Type	Fibers	(F/mm <sup>2</sup> )	(F/cc)
P0001-AS04-093014	DustTrak 1	9/30/2014	14:30	Ambient Air	Asbestos PCM (NIOSH 7400)	Field Sample	<5.5	<7.0	<0.004
P0001-AS05-093014	DustTrak 2	9/30/2014	14:21	Ambient Air	Asbestos PCM (NIOSH 7400)	Field Sample	<5.5	<7.0	<0.004
P0001-AS06-093014	DustTrak 3	9/30/2014	14:22	Ambient Air	Asbestos PCM (NIOSH 7400)	Field Sample	7.5	9.6	0.006
FB-100214-001	NA	10/2/2014	14:55	Field Blank	Asbestos PCM (NIOSH 7400)	Field Blank	<5.5	<7.0	-
LOTB-100214-001	NA	10/2/2014	14:50	Lot Blank	Asbestos PCM (NIOSH 7400)	Lot Blank	<5.5	<7.0	-
P0001-AS07-100214	DustTrak 1	10/2/2014	14:30	Ambient Air	Asbestos PCM (NIOSH 7400)	Field Sample	<5.5	<7.0	<0.004
P0001-AS08-100214	DustTrak 2	10/2/2014	14:32	Ambient Air	Asbestos PCM (NIOSH 7400)	Field Sample	<5.5	<7.0	<0.004
P0001-AS09-100214	DustTrak 3	10/2/2014	14:35	Ambient Air	Asbestos PCM (NIOSH 7400)	Field Sample	8	10.2	0.006
PAS01-101314	DustTrak Area	10/13/2014	14:31	Ambient Air	Asbestos PCM (NIOSH 7400)	Field Sample	<5.5	<7.0	<0.005
PAS01-102314	DustTrak Area	10/23/2014	13:45	Ambient Air	Asbestos PCM (NIOSH 7400)	Field Sample	<5.5	<7.0	<0.005
FB-101314-001	NA	10/13/2014	14:31	Field Blank	Asbestos PCM (NIOSH 7400)	Field Blank	<5.5	<7.0	-
FB-102314-001	NA	10/23/2014	13:45	Field Blank	Asbestos PCM (NIOSH 7400)	Field Blank	<5.5	<7.0	-

NA = Not Applicable
PCM = Phase Contrast Microscopy
F/mm<sup>2</sup> = Fibers per square millimeter
F/cc = Fibers per cubic centimeter

## Table 2: Sample Collection Information and TEM Validated Analytical Data Summary Puerto Rico Olefins Asbestos Site Peñuelas, Puerto Rico September 30, 2014 through October 23, 2014

Sample #	Sample Location	Sample Date	Sample Time	Matrix	Analysis	Sample Type	Total Numbers of Asbestos Structures Detected	Reported Sensitivity (F/cc)	Reported Air Concentration (F/cc)
P0001-AS04-093014	DustTrak 1	9/30/2014	14:30	Ambient Air	Asbestos TEM (NIOSH 7402)	Field Sample	None Detected	0.00165	<0.004
P0001-AS05-093014	DustTrak 2	9/30/2014	14:21	Ambient Air	Asbestos TEM (NIOSH 7402)	Field Sample	None Detected	0.00165	<0.004
P0001-AS06-093014	DustTrak 3	9/30/2014	14:22	Ambient Air	Asbestos TEM (NIOSH 7402)	Field Sample	None Detected	0.00169	<0.004
FB-100214-001	NA	10/2/2014	14:55	Field Blank	Asbestos TEM (NIOSH 7402)	Field Blank	NA	NA	NA
LOTB-100214-001	NA	10/2/2014	14:50	Lot Blank	Asbestos TEM (NIOSH 7402)	Lot Blank	NA	NA	NA
P0001-AS07-100214	DustTrak 1	10/2/2014	14:30	Ambient Air	Asbestos TEM (NIOSH 7402)	Field Sample	None Detected	0.00171	<0.004
P0001-AS08-100214	DustTrak 2	10/2/2014	14:32	Ambient Air	Asbestos TEM (NIOSH 7402)	Field Sample	None Detected	0.00171	<0.004
P0001-AS09-100214	DustTrak 3	10/2/2014	14:35	Ambient Air	Asbestos TEM (NIOSH 7402)	Field Sample	None Detected	0.00154	<0.004
PAS01-101314	DustTrak Area	10/13/2014	14:31	Ambient Air	Asbestos TEM (NIOSH 7402)	Field Sample	None Detected	0.00187	<0.004
PAS01-102314	DustTrak Area	10/23/2014	13:45	Ambient Air	Asbestos TEM (NIOSH 7402)	Field Sample	None Detected	0.00206	<0.005
FB-101314-001	NA	10/13/2014	14:31	Field Blank	Asbestos TEM (NIOSH 7402)	Field Blank	NA	NA	NA
FB-102314-001	NA	10/23/2014	13:45	Field Blank	Asbestos TEM (NIOSH 7402)	Field Blank	NA	NA	NA

NA = Not Applicable

TEM = Transmission Electron Microscopy

F/cc = Fibers per cubic centimeter

## ATTACHMENT C

Chain of Custody Records and FedEx Airbills

DateShipped: 10/2/2014 CarrierName: FedEx USEPA

CHAIN OF CUSTODY RECORD Site #: 0001-0005

Contact Name: Smita Sumbaly

Contact Phone: 732-585-4410

No: 2-100214-00010005-0001 Cooler #: 001

Lab Phone: 302-737-3376 Lab: Batta environmental Associates, Inc.

Lab#	Lab#   Sample#	Location Analyses	Analyses	Matrix	-	Sample Time	Sum to Court	Volume	Vol Units	Volume Vol Units Total_Time	Avg_Flow	Flow_Units
21420	FB-100214-001	Dust7rak	Asbestos (PCM&TEM)	Ąŗ	10/2/2014	14:55	-		Liters	-		L/min
¥	LOTB-100214-001	DustTrak	Asbestos (PCM&TEM)	Air	10/2/2014	14:50	₩.		Liters			Limin
かき	P0001-A804-093014	DustTrak 1 Asbestos (PCM&TE	Asbestos (PCM&TEM)	Air	9/30/2014	14:30	<b>4</b> -	621.72 Liters	Liters	240	2,5905	L/min
37	P0001-A806-093014	DustTrak 2		Air	9/30/2014	14:21	-	620.58	Liters	231	2.6865	L/min
3	P0001-AS06-093014	DustTrak 3	DustTrak 3 Asbeatos (PCM&TEM)	Air	9/30/2014	14:22	Į.	606,33	Liters	232	2.6135	L/min
3	P0001-AS07-100214	DustTrak 1	DustTrak 1 Asbestos (PCM&TEM)	Air	10/2/2014	14:30	1	599,88	Liters	240	2.4995	L/min
<u>48</u>	P0001-AS08-100214	Dust Trak 2 Asbestos (PCM&TE	iM)	Air	10/2/2014	14:32	1	600,04	Liters	242	2,4796	L/min
1 1 1	P0001-A809-100214	Dustriak 3 Asbestos (PCM&TE	iM)	Air	10/2/2014	14,35	-	664.93 Liters		245	2.714	L/min
						~_						
					The second secon							

Special Instructions: Total Sampling time units in minutes Provide TWA calculations. Turnaround time 72 hrs. RFP# 303

YSM PAC.

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY#

Time	·		
Date Time			
Received by	-		
Date			
Relinguished By			
Received by Date Time Items/Reason Relinquished By Date			
Time	(300)		
Oate	०००। नग्रध्य		
Received by	1214 - ZIMNOS		
Date	m/r/ot:	11,	,
Relinquished by	Carlos flust		
ns/Reason	Jung		1

Date Shipped: 10/13/2014 AirbillNo: 800093579288 CarrierName: FedEx USEPA

CHAIN OF CUSTODY RECORD PR Olefins Removal Contact Name: Smita Sumbaly Contact Phone: 732-585-4410

No: 2-401314-00010005-0001

Lab: Batta environmental Associates, Inc.

Coaler #: 001

Lab Phone: 302-737-3376

		<del></del>	 -		· 		,		··		<del>,</del>		_	•
Flow_Units	lim'	L/min												
Avg_Flow		2.461								,				
Volume Voi Units Total_Time Avg_Flow Flow_Units		223			-							-		
Vol Units	Liters													
1		548.8 Liters												
Numb Cont	*	-					,							
Sample Time	14:31	14:31												
Collected	10/13/2014	10/13/2014												
Matri	Αŗ	¥												
Analyses	Asbestos (PCM&TEM)	Asbestos (PCM&TEM)						,						
Location	FB-101314-001 DustTraksArea Asbestos (PCM&TEM)	DustTraksArea												
Sample #	FB-101314-001	PAS01-101314		,							.:			
-ab #	18182					•								

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY# TEM FOR SOC Special Instructions: Total Sampling time units in minutes. Provide TWA calculations. Turnaround time 72 hrs. RFP#: 303

tems/Reason	Refinduished by (Signature and Organization)	ganizationly Date/Time	Received by (Signature and Organization) Date/Time Sample Condition Upon Receipt	Date/Time	Sample Condition Upon Receipt
411-most	Ame / Meagle	10-13-14	10-13-14 SomiaMi. FAMA UROSANORIAS IdISIN PROSO	idishi4e1020	Pocephage
,	At. C			-	
			-		

Date Shipped: 10/23/2014 USEPA

AirbilNo: 800093579279 CarrierName: FedEx

CHAIN OF CUSTODY RECORD

Contact Phone: 732-585-4410

Contact Name: Smita Sumbaly PR Olefins Removal

No: 2-102314-00010005-0001 Cooler #: 001

Lab Phone: 302-737-3376 ...ab: Batta environmental Associates, Inc.

Flow\_Units L/min Ľmiri Avg\_Flow 2.111 Total\_Time 器 Vol Units L'EBL'S Lifers 496.09 Volume Numb Cont Sample Time 13:45 13:45 10/23/2014 10/23/2014 Collected Ą Æ Asbestos (PCM&TEM) Asbestos (PCM&TEM) Analyses DustTraksArea **DustTraksArea** Location PAS01-102314 FB-102314-Sample # Lab# P35549 84828

TYM LOC. Special Instructions: Total Sampling time units in minutes Provide TWA calculations. Turnaround time 72 hrs. RFP#: 303

CHAIN OF CUSTODY#

SAMPLES TRANSFERRED FROM

Sample Condition Upon Receipt S S S S Date/Time Received by (Signature and Organization) 10-23-14 Date/Time Relinquished by (Signature and Organization) Items/Reason



## Expanded Service International Air Waybill

For FedEx services worldwide including express freight services, dangerous goods, broker select, and letter of credit.

dangerous goods, broker ser	ood, and lotter or		1	
From Please point and press hard.  Date 12 14 Sender's FedEx Account Number SE	NOFR'S FFORK	ACCOUNT NU	MBER ONLY	
Sender's Can OS L. Huwtas	sol to Augustide o	シスぐり	1-2480	9
Name Carros Sla	TOWN TO BE RECEIVED	of which the state of the state		dues.
Company Western Solar	1 1	and an entire of	1.1	
Address [1] Ponce a	le Lu	IVL A	ou _	
Address My HC	Vie oute now Cartele, or De	7) 1	7.	SALE SALE
city Santwae	State Province	and the second second	o Pic	0
Country USA	ZIP Postal Code	00 %	07	and a
To Recipient's Mr. Bulla.	30	7-73	7-337	6
Name  Day Ida Calla	Phone SU	ital	A STATE OF	L'no
Company Barra Envir	1 / L	100	iff	Santa Sant The Santa
Address 6 garfle	Dept./Floor	ray	2	edents 94
Address	igate malygrames paying off made	NE		net ex
city Newark	State Province	DL	2 -01	1
Country USA	ZIP Postal Code	19713	3-581	+
Recipient's Tax ID Number for Customs Purposes e.g., GST/RFC/VAT/IN/EIN/ABN, or as locally required.	Wednesd The new year	n annishen b	70	Time!
Shipment Information  Total Packages Shipper's Load and Count/SLAC Weight	bs.	enje Wedy	in.	
Commodity Description	Harmonized Code	Country of Manufacture	Value for Customs	
DETAIL REQUIRED, PRINT IN ENGLISH.	d entra na serpana en Ven San Herbert Mil	torus his toer torus his toer Naith ou bishelf		na) fra Spring
Supplied of the control of the sea replace of the season of the State of the season of	nd office are the second	opteingt grünt gas la magen		Kitol
E		eta to ewal his accinei la nici		0.00
Environmental Air Samples	palation Relitions palation are would be employed to be the	True Point (edit in ) Judy 15th (edit in )	100.00	11
Samples	Marine III remail Marine III marine Marine III marine	or coping right	100	1>)
The activities of the automorphism of the separate of the services of the service	The section of the se	Carlo Andrews	14	IN OTHER
Has EEI boon filed in AES? For EU Only: Tick here if goods	s are not Total Declared	Value 100.01	Total Value	Total
Number, no license required (NLR), not subject to ITAR.	NLR, enter License Exception:	veg I grotten	(Specify Currency	
No EEI required, enter exemption number:  Yes – Enter AES proof of filing citation:	and service of the con- traction of the con- traction provident con-	this distance as a second to the frame of the results son the	100 0	4

For Completion Instructions, see back of fifth page.

## Questions? Go to our Web site at fedex.com.

In the U.S., call 1.800.GoFedEx 1.800.463.3339. Outside the U.S., call your local FedEx office.

The terms and conditions of service may vary from country to country. Consult our local office for specific information Non-Negotiable International Air Waybill • ©1994–2008 FedEx

## The World On Time.

la E		dollo di o avolico i	o all destinations.
100	Express Package Service		Packages up to 150 lbs. / 68 kg
F	FedEx Intl. Priority	FedEx Intl. First Available to select locations.	FedEx Intl. Economy FedEx Envelope and FedEx Pak rate not available.
C			department of the
th [	Express Freight Service	A DESCRIPTION OF THE PARTY OF T	Packages over 150 lbs. / 68 kg
	FedEx Intl. Priority Freight	FedEx	Intl. Economy Freight
-	THE RESERVE THE PROPERTY OF THE PARTY OF THE	QUIRED	par in a reposit and a
Please c	call your local FedEx office to book shipments		And the second second second
5 1	Packaging	The second of the second of the	rese unique brown boxes with special pricing are provided by FedEx for FedEx Intl. Priority only
	FedEx Envelope Fed	Ex Pak	FedEx Box FedEx Tube
	Other	FedEx 10	kg Box* FedEx 25kg Box*
6a	Special Handling		
	HOLD at FedEx Location	SATURDAY De Available to select lo for FedEx Intl. Priority	cations
Do	oes this shipment contain dangerous One box must be checked / ticked	goods? FodEx Intl. Priority Er	eight only.
1	No Yes Yes	of Designation Living States and the	Dry Ice Dry Ice, 9, UN 1845xkg
	Shipper's Declaration. not re	berliupe	Cargo Aircraft Only
1250 1111	us goods (including dry ice) cannot be shipped in		Intl. Broker Select
6b	Broker Selection Not available with FedEs Intl. First.	OT THE PERSON NAMED IN	To specify a broker other than FedEx.
	Broker's Name		
	City / State / Province / Country	We appropriate	) (mixingle) my f(20)
	ZIP / Postal Code REQUIR	ED Phone	
7		nplete payment options for bo	th transportation charges and duties and taxes
	Bill transportation charges to:	dEx Acct. No. or Credit Card	No. below. Cash
	Section I will be billed.	ient Party	Credit Check/
FedEx Ac	oct No. 402	05 6 10	FedEx Use Only
Credit Co	ard No.	Children in the State of the St	Miles to somewhat
Credit Ca	and Exp. Date	201	L. Charle Contract shares
	Bill duties and taxes to:	which	ripments may be subject to Customs charge ir FedEx does not estimate prior to clearence
7	Constant to	dEx Acct. No. below	IN THE REAL PROPERTY.
	Section 1 will be billed.	Party	6603
	FedEx Acct. No.	70203	evo
		all a Tours election	A DISCOURT OF THE PARTY OF THE
8	Your Internal Billing Refer	De olou	First 24 characters will appear on invol
		K-C-C-V	7175
9	Required Signature	THE REAL THE ROTTER OF	THE RESERVE AND ADDRESS OF THE RESERVE AND ADDRE
/			ditions of Contract on the back of this Ai
	for damage loss or delay as dear	abod in the Congruees of C	apply to this shipment and limit our liab contract.
	WARNING: These commodities, tech with Export Administration orgulation	nology, or software were e is. Diversion contrary to U.S.	xported from the United States in accorda i. lavy prehibited.
	Sender's	100	1100
	Signature: This is not authorization to domer this ship	ment withour a confirm Signatu	ure.
	AND REAL PROPERTY AND REAL PRO		Colombia of Charles and Colombia
	FedEx Courie Receipt		Date:
	Courier Receipt: For letter of credit shipments only.	O'CHARLES A	Date:
	Courier Receipt:	Chair to	Date:

569

PART 158412 \* Rev. Date 11/08 @1994-2008 FedEx \* PRINTED IN U.S.A. RRDA

9235 Form 0425



## Expanded Service International Air Waybill

For FedEx services worldwide including express freight services, dangerous goods, broker select, and letter of credit.

	NATIONAL PROPERTY.		
ate MO/18/14 Sender's FedEx Account Number	ENDER'S FEDEX	ACCOUNT NU	MBER ONLY
ender's Angel Alicec	Phone 7	87365	-9290
company Weston Situ	tions	of all fall parts A at all this they at	W I
Address 1715 Ponce of	de Leon	Au	e.
Address Suite Z	Organis International Company of the	rsainidithe crear colores stally o seen treat enter	M T
santarce Santarce	State Province	PR	G G
Country USA	ZIP Postal Code	009	09
To Recipient's Mr. Batta	Phone 3	02-73	7-33
company Batta Eur	irame	ntal	ía ,
Address 6 Gar field	d Wa	4	off.
Address	Dept/Floor	ca hypothelic in nei mayli yeni.	nii ref
1 house	State Province	D	F
City / Court / C			
UCA	ZIP Postal Code	197	13-5
Country  Los A  Recipient's Tax ID Number for Customs Purposes	ZIP Postal Code	197	13-5
Country  Cou		197	13-5
Country  ### Count		197	0 0
Country  ### Count	Postal Code	197	<u> </u>
Country  WSA  Recipient's Tax ID Number for Customs Purposes  Do. G. SST/RFC/VAT/IN/EIN/ABN, or as locally required.  Shipment Information  Total Packages  Weight	Postal Code		
Country  Recipient's Tax ID Number for Customs Purposes  Beipment Information  Total Packages  Shipper's Load and Count/SLAC  Commodity Description	Postal Code		Value for Custom
Country  Recipient's Tax ID Number for Customs Purposes  Do. G. GST/RFC/VAT/IN/EIN/ABN, or as locally required.  Shipment Information  Total Packages  Commodity Description  DETAIL REQUIRED PRINT IN ENGLISH	Postal Code		Value for Custom
Country  Recipient's Tax ID Number for Customs Purposes  Do. G. GST/RFC/VAT/IN/EIN/ABN, or as locally required.  Shipment Information  Total Packages  Commodity Description  DETAIL REQUIRED PRINT IN ENGLISH	Postal Code    Ibs.	Manufacture	Value for Custom
Country  Recipient's Tax ID Number for Customs Purposes  Begin General Information  Total Packages Shipper's Load and Count/SLAC  Commodity Description  DETAIL REQUIRED PRINT IN ENGLISH	Postal Code    Ibs.	Manufacture	Value for Custom
Country  Commodity Description  Commodity Description  Country  Co	Postal Code    Ibs.	Manufacture  Manuf	Value for Custon
Country  WS A  Recipient's Tax ID Number for Customs Purposes  o.g. GST/RFC/VAT/IN/EIN/ABN, or as locally required.  Shipment Information  Total Packages Shipper's Load and Count/SLAC  Commodity Description  DETAIL REQUIRED PRINT IN ENGLISH  Art Samples  For EU Only: Tick here if you  No FET English and provi	Postal Code    Ibs.	Manufacture  Manuf	Value for Custom
Country  Recipient's Tax ID Number for Customs Purposes  a.g. GST/RFC/VAT/IN/EIN/ASN, or as locally required.  Shipment Information  Total Packages  Shipper's Load and Count/SLAC  Commodity Description  DETAIL REQUIRED. PRINT IN ENGLISH  Ab' Samples  Has EEI been filed in AES?  For U.S. Export Only: Check One  No EEI required, value \$2,500 or less per Schedule B	Postal Code    Ibs.	Manufacture	/// N

For Completion Instructions, see back of fifth page.

## Questions? Go to our Web site at fedex.com.

In the U.S., call 1.800.GoFedEx 1.800.463.3339.

Outside the U.S., call your local FedEx office.

The terms and conditions of service may vary from country to country. Consult our local office for specific information Non-Negotieble International Air Waybill • ©1994–2008 FedEx

## The World On Time.

Not all services and options are available to all destinations.	W. Ho
a Express Package Service Packages up to 150 lbs.	68 kg
FedEx Intl. Priority FedEx Intl. First FedEx Intl. Economic FedEx Intl.	ITTY Ex Pak
The state of the s	
b Express Freight Service Packages over 150 lbs.	/ 68 kg
FedEx Intl. Priority Freight FedEx Intl. Economy Freight	
ooking Number REQUIRED	
ease call your local FedEx office to book shipments.	7-10
Packaging These unique brown boxes with special provided by FedEx for FedEx Intl. Pr	pricing are
	Ex Tube
Other FedEx 10kg Box* FedEx 25	kg Box*
a Special Handling	
HOLD at FedEx Location  Boes this shipment contain dangerous goods? FedEx Int. Priority Freight only.	Ш
One box must be checked / ficked.	
No Yes As per attached Shipper's Declaration. To troulind. Cargo Aircraft Only	kg
Ingerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Orop Box.	
b Broker Selection Not available with FedEx Ind. First.  Intl. Broker Select To specify a broker other than FedEx.	
Broker's Name	-
City / State / Province / Country	
ZIP/Postal Code REQUIRED Phone	
dis Acet. No.	
edit Card Exp. Date  ALL shipments may be subject to Custom	s charges
Bill duties and taxes to: which FadEx does not estimate prior to	clearance
Sender Acct No. in Regiment Priff	
Sender Acct. No. in Section 1 will be billed. Party	
FadEx Acrt. No. 7023) 6/02	
and the second section of the second section and the second section of the section of the second section of the s	The second
8 Your Internal Billing Reference  PROPONETING	er on invoice
9 Required Signature	100
Use of this Air Waybill constitutes your agreement to the Conditions of Contract on the back of Waybill, and you represent that this shipment does not require a U.S. State Department licent Waybill, and you represent that this shipment and limit may apply to this shipment and limit	of this Air se. Certai our liabil
for damage, loss, or delay, as described in the Conditions of Contract.  WARNING: These commodities, technology, or software were exported from the United States in write Export Administration regulations. Diversion contrary to U.S. law prohibited.	accordan
Sender's	
Signature: This is not authorization to deliver this shipment author it to option algorithms.	-
FedEx	
Courier Receipt: Date:  For letter of credit alignments only.	
Ship and track packages at fedex.com	n
FedEx Form OL	170

569

PART 158412 \* Rev. Date 11/08



# Expanded Service International Air Waybill

For FedEx services worldwide including express freight services, dangerous goods, broker select, and letter of credit.

Sender's Fedex Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY  Sender's Phone 787 365 9290  Company  Leston Solutions  Address 1715 Ponce de Lean Aug  City Santaval State Province  Country  LIP Postal Code 0909  To Recipient's Name  R. H. E. S. Augentaure Phone 302-737-33
Company  Weston Solutions  Address  Address  Suite  City Santarce  State Province  Province  State Province  To  Recipient's  Recipient
Address 1715 Ponce de Leon Aug.  Address Suite Z  City Santarce State Province PR  Country USA ZIP Postal Code 00909  To Recipient's Mr Botte Barte 302-737-33
Address  Suite Z  City Santarce State Province PR  Country USA ZIP Postal Code 00909  To Recipient's Mr Batte Province 302-737-33
City Santarce State PR  Country USA ZIP Postal Code 00909  To Recipient's Mr Batte Province PR  Phone 302-737-33
Country USA ZIP Postal Code 00909  To Recipient's Nr Botte Phone 302-737-33
To Recipient's Mr Botte Bone 302-737-33
Recipient's 1/2 Botte 302-737-33
P. Ha E amontal
Company Dalla Environments
Address 6 Garfield Way
Address
city Newark State DE
Country USA ZIP Postal Code 19713-581
Recipient's Tax ID Number for Customs Purposes e.g. GST/RFC/VAT/IN/EIN/ABN, or as locally required.
Shipment Information Ibs. In a second of the
Total Packages Shipper's Load and Count/SLAC
Commodity Description Harmonized Code Country of Value for Customs Manufacture
DETAIL REQUIRED, PRINT IN ENGLISH TO SEE THE PRINT IN ENGLISH THE PRINT
The second of th
Environmental 100° is
1. San bles
According to the first the transfer to the state of the s
TO ACTUAL PROPERTY TO ACTUAL TOP OF SAW. DESCRIPTION AND THE TOP SCHOOL TO ACTUAL TOP OF SAME AND THE SAME AN
Has Et been filed in AES? For LUS. Expert Only: Clanck One in free circulation and provide C.I.  For LUS. Expert Only: Clanck One in free circulation and provide C.I.  Sequent Only: Clanck One in free circulation and provide C.I.
No.EEI required, value \$2,500 or less per Schedule 8  Maybber, no license required (NLR), not subject to ITAR:  If other than NLR, enter License Exception:
No EEI required, enter exemption number:

For Completion Instructions, see back of fifth page.

#### Questions? Go to our Web site at fedex.com.

In the U.S., call 1.800.GoFedEx 1.800.463.3339. Outside the U.S., call your local FedEx office.

The terms and conditions of service may vary from country to country. Consult our local office for specific information. Non-Negotiable International Air Waybill • ©1994–2008 FedEx

## The World On Time.

N	ot all services and op	tions are available to all destinations.
a Express	Package Service	Packages up to 150 lbs. / 68 kg
FedEx In	tl. Priority	FedEx Intl. First  Available to select locations.  FedEx Envisions and FedEx Pek rate not available.
	THE REAL PROPERTY.	AND THE BEAUTY OF MET IS THEN AND THE WIFE
b Expres	s Freight Service	Packages over 150 lbs. / 68 kg
FedEx Ir	ntl. Priority Freight	FedEx Intl. Economy Freight
leeking Number Tease call your loc	al FedEx office to book shipments	EQUIRED
Packa	ging The same of t	"These unique brown boxes with speciel pricing are provided by FedEx for FedEx Intl. Priority only.
FedEx E	nvelope Fed	Ex Pak FedEx Box FedEx Tube
Other		FedEx 10kg Box* FedEx 25kg Box*
ia Specia	I Handling	THE RESIDENCE OF THE PARTY OF T
HOLD a	t FedEx Location	SATURDAY Delivery Available to select locations for Fe6Ex Intl. Priority and
Does this s	hipment contain dangerous box must be checked / ticket	goods? FedEx Intl. Priority Freight only.
□ No □	Yes Yes	
	Shipper's Declaration. not r	required. Cargo Aircraft Only
		in FedEx packaging or placed in a FedEx Express Drop Box.  Intl. Broker Select
b Broke	r Selection ble with FedEx Intl. First.	To specify a broker other than FedEx.
Broker's N	ame	
City / State	/ Province / Country	Of the length of
ZIP / Posts		RED Phone  property payment options for both transportation charges and duties and taxes.
	Acct. No. in Recip	pient Third Credit Check/ Party Gard Cheque FadEx Use Only
Credit Card Exp. Da	te.	Chambridge San R. Annual St.
Bill du	ties and taxes to:	ALL shipments may be subject to Customs charges, which FedEx does not estimate prior to clearance. adEx Acct. No. below.
Section 1	F Aset No. in Recip	pient Party 103
FedEx Ac	st No.	
8 Your	Internal Billing Refe	rence Pictorial of the first 24 characters will appear on invoice
O Down	ind Cianatura	Company of the Compan
Use of Waybil interna for dan	tional treaties, including the mage, loss, or delay, as desc	your agreement to the Conditions of Contract on the back of this Air is shipment does not require a U.S. State Department license. Certail e starsaw Convention, may apply to this shipment and limit our liability bribed in the Conditions of Contract.  thiology, or software were exported from the United States in accordant
Send Send	port Administration regulation	ns. Diversion contrary to U.S. law prohibited.
Signa This is n	TUTE: of authorization to deliver this shi	igment without a recipient signature.
FedEX	er Receipt:	Date:
-	er of credit shipments only.	ON TOTAL DEPOSIT AND SENTENCE
	Shin an	d track packages at fedex.com
	yy siiip aii	a track packages at touck.com

FedEx Tracking 8000 9357 9279 form 0425

569

## ATTACHMENT D

Personal Air Sampling Data Validation Memorandum



Weston Solutions, Inc.
Suite 201
1090 King Georges Post Road
Edison, New Jersey 08837-3703
732-585-4400 • Fax: 732-225-7037
www.westonsolutions.com

#### The Trusted Integrator for Sustainable Solutions

REMOVAL SUPPORT TEAM 3 EPA CONTRACT EP-S2-14-01

RST3-01-F-0047

#### TRANSMITTAL MEMO

To:

Ángel Rodríguez, On-Scene Coordinator

Caribbean Environmental Protection Branch

U.S. EPA, Region II

From:

Smita Sumbaly, Data Reviewer

RST 3, Region II

Subject:

Puerto Rico Olefins Asbestos Site

**Data Validation Assessment** 

Date:

November 10, 2014

The purpose of this memo is to transmit the following information:

• Data validation results for the following parameters:

Asbestos PCM and TEM

12 Samples

• Matrices and Number of Samples

Air

8 Samples

Lot/Field Blanks

4 Samples

Sampling Dates:

September 30, 2014 through October 23, 2014

The final data assessment narrative and original analytical data package are attached.

cc:

RST 3 SPM:

Carlos Huertas

RST 3 SITE FILE TDD #:

TO-0001-0005

ANALYTICAL TDD #:

TO-0001-0038

PCS#:

1038

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

#### **MEMORANDUM**

DATE:

November 10, 2014

TO:

Ángel Rodríguez, On-Scene Coordinator

U.S. EPA, Region II

FROM:

**Smita Sumbaly** 

**RST 3 Data Review Team** 

SUBJECT:

**QA/QC** Compliance Review Summary

As requested quality control and performance measures for the data packages noted have been examined and compared to EPA standards for compliance. Measures for the following general areas were evaluated as applicable:

Data Completeness
Sample Collection, Holding Times, and Preservation
Blank Analysis
Sample Sensitivity
Monthly Report PCM and TEM Calibrations

Any statistical measures used to support the following conclusions are attached so that the review may be reviewed by others.

#### Summary of Results

	I <u>Asbestos</u> <u>PCM</u>	II <u>Asbestos</u> <u>TEM</u>		
Acceptable as Submitted Acceptable with Comments	<u>X</u>	<u>X</u>		•
Unacceptable, Action Pending Unacceptable				
Data Reviewed by:	mita Sumbaly	·	Date: 11/10/201	<u>4</u>
Approved By:		3_	Date: 11/10/14	
Area Code/Phone No.:	/32) 585-4410	_		

#### **NARRATIVE**

#### **PCS No. 1038**

SITE NAME:

**Puerto Rico Olefins Asbestos Site** 

PR 385 KM 5.4 Int., 127 Tallaboa Ponente,

Ward Penuelas, Puerto Rico

**Laboratory Name:** 

Batta Laboratories, 6 Garfield Way, Newark, DE 19713-5817.

#### INTRODUCTION:

The laboratory's portion of this case consisted of 12 air samples, including three field blanks and one lot blank. Samples were collected from September 30, 2014 through October 23, 2014. The Batta Laboratory project number is L6888J.

The laboratory reported No problem(s) with the receipt of these samples.

The laboratory reported No problems with the analyses of Asbestos PCM and TEM.

The evaluator has commented on the criteria specified under each fraction heading. All criteria have been assessed, but no discussion is given where the evaluator has determined that criteria were adequately performed or require no comment. Details relevant to these comments are given on the following forms.

Appropriate Form Is and Chain of Custody have been copied from the original data package and appended to the data assessment narrative for reference.

#### STANDARD OPERATING PROCEDURE

Title: Evaluation of Asbestos Data
Data Assessment Narrative

RFP #: 303/Task#: 1038 Site: Puerto Rico Olefins Ashestos Site

Lab: Batta Laboratories Matrix/No. of Samples: Air/12

SDG#'s: L6888J

Reviewer: SMITA SUMBALY Contractor: WESTON-RST 3

A.2.1 <u>Validation Flags</u>— The following flags have been applied in red by the data validator and must

be considered by the data user.

J- This flag indicates the result qualified as estimated.

Red-Line- A red-line drawn through a sample result indicates an unusable value. The

red-lined data are known to contain significant errors based on documented

information and must not be used by the data user.

Fully Usable Data- The results that do not carry "J" or "red-line" are fully usable.

#### A.2.2 The data assessment is given below and on the attached sheets.

From September 30, 2104 through October 23, 2014, U.S. EPA, Region II, RST 3 personnel collected 12 air samples, including three field blanks and one lot blank, from the Puerto Rico Olefins Asbestos Site, located at PR 385 KM 5.4 Int., 127 Tallaboa Ponente, Ward Penuelas, Puerto Rico. Within 24 hours of collections, all samples were shipped via FedEx to Batta Laboratories, 6 Garfield Way, Newark, DE. The laboratory verified that the samples were received intact and properly custody sealed.

All 12 air samples for asbestos were collected on a 25 mm, 0.45µm MCEF cassettes. Samples were prepared and analyzed for asbestos according to Phase Contrast Microscopy (PCM) using NIOSH Method 7400, Revision 3, Issue 2 (8/15/94). The limit of detection for the air method is 5.5 fibers for 100 fields of views, or 7 fibers per square millimeters. All 12 samples were also analyzed for Transmission Electron Microscopy (TEM) by NIOSH Method 7402, Issue 2 (8/15/94). The target sensitivity for the air method is 0.004 fiber/cc.

#### .Client identification (ID) and laboratory ID numbers are as follows:

Client ID No.	Laboratory ID	Matrix	<u>Sampling</u>	<u>Analysis</u>
	No.		<u>Date</u>	
Project No. L6888J				
FB-100214-001	802404/802412	Air	10/02/2014	Asbestos PCM and TEM
LOTB-100214-001	802405/802413	Air	10/02/2014	Asbestos PCM and TEM
P0001-AS04-0930	802406/802414	Air	9/30/2014	Asbestos PCM and TEM
P0001-AS05-0930	802407/802415	Air	9/30/2014	Asbestos PCM and TEM
P0001-AS06-0930	802408/802416	Air	9/30/2014	Asbestos PCM and TEM
P0001-AS07-1002	802409/802417	Air	10/02/2014	Asbestos PCM and TEM

Title: Evaluation of Asbestos Data Data Assessment Narrative

Client ID No.	<u>Laboratory ID</u> No	<u>Matrix</u>	Sampling Date	<u>Analysis</u>
P0001-AS08-1002	802410/802418	Air	10/02/2014	Asbestos PCM and TEM
P0001-AS09-1002	802411/802419	Air	10/02/2014	Asbestos PCM and TEM
FB-101314-001	803185/803187	Air	10/13/2014	Asbestos PCM and TEM
PAS01-101314	803186/803188	Air	10/13/2014	Asbestos PCM and TEM
FB-102314-001	803546/803548	Air	10/23/2014	Asbestos PCM and TEM
PAS01-102314	803547/803549	Air	10/23/2014	Asbestos PCM and TEM

#### Asbestos PCM and TEM analyses by NIOSH Methods 7400 and 7402

Twelve air samples, including three field blanks and one lot blank, were analyzed by PCM – NIOSH Method 7400 and TEM-NIOSH Method 7402. All PCM data were reported in fibers/mm² and fibers/cc; and TEM data were reported in fibers/cc. Out of 12 samples, three field blanks, one lot blank, and six other field samples were reported as <7.0 fibers/mm² and other two samples were reported as 9.6 and 10.2 fiber/mm² (0.006 f/cc). Laboratory counted fibers in 100 fields for each sample. For PCM analysis, fibers greater than 5.0 um in length with an aspect ratio of ≥3:1 were reported. For TEM analysis laboratory reported fibers >5 um in length and >0.25 um in width as per NIOSH Method 7402.

All 12 samples were also analyzed for TEM by NIOSH Method 7402. Laboratory opened the minimum 40 grids or 100 fibers were counted. All TEM results were reported below the limit of detection.

For QC purposes, the laboratory performed reanalysis of four samples per batch. All QC results are acceptable. Laboratory also included Calibration Sheet, PCM and TEM Routine Alignment & calibration Form, and Analytical Bench Sheet with the data package.

The results presented for the air samples are acceptable as reported. No qualifications were required.

#### ASBESTOS - PCM and TEM TABULATED RESULTS

Client Sample ID Number	Laboratory Sample ID Number	Volume (liters)	Fibers	PCM – N Fields	Treatment of the State of the S	Fibers /mm2	Fibers/cc	TEM - N TEM Results (f/ce)	IOSH 7402 Asbestos Type Detected
Sampling Date:	October 2, 201	<b>L4</b>		·	'				•
FB-100214-001	802404/ 802412	-	<5.5	100	-	<7.0	*	n/a	n/a
LOTB-100214- 001	802405/ 802413	-	<5.5	100		<7.0	*	n/a	n/a
P0001-AS04- 0930	802406/ 802414	621.7	<5.5	100	0.004	<7.0	<0.004	<0.004	None Detected

Title: Evaluation of Asbestos Data
Data Assessment Narrative

edian Sample	Laboratory	ZERONENIOSE7400					BENEVICE! A405			
ID Number	Sample ID	CONTRACTOR STREET					Fibers/cc	E TEM	Asbestos	
	Number -	(liters)			(f/ce)	/mm2		Results	lype	
				remail and a				(f/cc)	Detected	
P0001 4005	0004074	I		100						
P0001-AS05-	802407/	620.6	<5.5	100	0.004	<7.0	<0.004	<0.004	None	
0930	802415								Detected	
P0001-AS06-	802408/	606.3	7.5	100	0.004	9.6	0.006	< 0.004	None	
0930	802416								Detected	
P0001-AS07-	802409/	599.9	<5.5	100	0.004	<7.0	< 0.004	< 0.004	None	
1002	802417								Detected	
P0001-AS08-	802410/	600	<5.5	100	0.004	<7.0	< 0.004	< 0.004	None	
1002	802418								Detected	
P0001-AS09-	802411/	664.9	8	100	0.004	10.2	0.006	< 0.004	None	
1002	802419								Detected	
FB-101314-001	803185/	-	<5.5	100	-	<7.0	*	n/a	n/a	
	803187		-							
PAS01-101314	803186/	548.8	<5.5	100	0.005	<7.0	<0.005	< 0.004	None	
	803188								Detected	
FB-102314-001	803546/	-	<5.5 -	100	-	<7.0	*	n/a	n/a	
	803548		·							
PAS01-102314	803547/	496.1	<5.5	100	0.005	<7:0	<0.005	< 0.005	None	
	803549								Detected	

\* - Field Blank/Lot Blank Fibers/mm² - Fibers per millimeter square Fibers/cc - Fibers per cubic centimeter  $\begin{array}{c} LOD-Limit\ of\ Detection\\ n/a-not\ applicable \end{array}$ 

Date:

#### A.2.3 Contract Problem/Non-Compliance:

None

Contractor Reviewer:

Smita Sumbaly
Signature:

Date:

Verified by:

Signature:



## **batta**BATTA LABORATORIES, INC.

A Certified MBE Company

CERTIFICATE OF PCM ANALYSIS

Test Method: NIOSH 7400, Issue 2: 15 August 1994

Delaware Industrial Park, 6 Garfield Way, Newark, DE 19713-5817 Tel. (302) 737-3376 Fax (302) 737-5764

Web: http://www.battaenv.com

E-mail: battaenv@battaenv.com

E.P.A. LABID # DE 004



A.I.H.A. /NLLAP #100448



NVLAP #101032

Sampling Data

BLI Project#:

L6888J

Project Name:

a: V

WESTON SOLUTIONS-RFP NO. 303-EP-S2-14-01

Report Date:

Page 1 of 2 10/6/2014

Date Sampled:

10/2/14

Sampled By: Date Analyzed: CLIENT 10/4/14

#### **Analytical Parameters**

Effective Filter Area ( mm 2):

385

Graticule Field Area( mm 2):

0.00785

				Grandale Fleid Area( mm ): 0.00785			
Client Sample #	Sample Type	Sample Volume(L)	Fields	Fibers	Detection Limit(F/cc)	Test Res	sults F/cc
FR-100214-001	re .		400			·	<del></del>
	Ρ <b>υ</b>		100	<0.0	N/A	<7.0	N/A
LOTB-100214-001	LB	0	100	<5.5	N/A	<7.0	N/A
P0001-AS04-0930	FS	621.7	100	<5.5	0.004	<7.0	<0.004
		······································					
P0001-AS05-0930	FS	620.6	100	<b>&lt;</b> 5.5	0.004	<7.0	<0.004
P0001-AS06-0930	FS	606.3	100	7.5	0.004	9.6	0.006
P0001-AS07-1002	FS	. 599.9	100	<5.5	0.004	<7.0	<0.004
	FB-100214-001  LOTB-100214-001  P0001-AS04-0930  P0001-AS05-0930  P0001-AS06-0930	FB-100214-001 FB  LOTB-100214-001 LB  P0001-AS04-0930 FS  P0001-AS05-0930 FS  P0001-AS06-0930 FS	Volume(L)  FB-100214-001 FB 0  LOTB-100214-001 LB 0  P0001-AS04-0930 FS 621.7  P0001-AS05-0930 FS 620.6  P0001-AS06-0930 FS 606.3	Volume(L)           FB-100214-001         FB         0         100           LOTB-100214-001         LB         0         100           P0001-AS04-0930         FS         621.7         100           P0001-AS05-0930         FS         620.6         100           P0001-AS06-0930         FS         606.3         100	Volume(L)           FB-100214-001         FB         0         100         <5.5           LOTB-100214-001         LB         0         100         <5.5	Client Sample #         Sample Type         Sample Volume(L)         Fields         Fibers         Detection Limit(F/cc)           FB-100214-001         FB         0         100         <5.6	Client Sample #         Sample Type         Sample Volume(L)         Fields         Fibers Limit(F/cc)         Detection Limit(F/cc)         Test Revenue F/mm 2           FB-100214-001         FB         0         100         <5.5

**ANALYST:** 

A. YOHN

REVIEWED BY:



- \* Sample results listed above are not blank-corrected.
- \* Results pertain only to the Items tested.
- \* This report does not constitute endorsement by AIHA and/or any other U.S. government agencies.
- Named analyst may not be sole analyst. Refer to Chain of Custody for additional analysts.
- \* Sample volumes are calculated from data supplied by the client. Batta Laboratories, Inc. does not accept liability for results expressed in fibers per cubic centimeter. Furthermore, Batta Laboratories assumes no responsibility for the accuracy of results reflected by the use of improper collection techniques or equipment.
- \* Current YTD intralaboratory Sr value is 0.22. This value may change slightly over time.



A Certified MBE Company

Delaware Industrial Park, 6 Garfield Way, Newark, DE 19713-5817 Tel. (302) 737-3376 Fax (302) 737-5764

Web: http://www.battaenv.com

E-mail: <u>battaenv@battaenv.com</u>

E.P.A. LAB ID # DE 004



A.I.H.A. /NLLAP #100448



NVLAP #101032

Page 2 of 2

## CERTIFICATE OF PCM ANALYSIS

Test Method: NIOSH 7400, Issue 2: 15 August 1994

Report Date:

10/6/2014

Sampling Data

Project Name:

BLI Project#: L68

L6888J

WESTON SOLUTIONS-RFP NO. 303-EP-S2-14-01

Date Sampled:

10/2/14

Sampled By: Date Analyzed: CLIENT 10/4/14

**Analytical Parameters** 

Effective Filter Area ( mm 2 ):

Graticule Field Area( mm 2):

0.00785

Lab Sample #	Client Sample #	Sample Type	Sample Volume(L)	Fields Fibers Detection Limit(F/cc)			Test Res	ults F/cc	
8,02410	P0001-AS08-1002	FS	600	100	<5.5	0.004	<7.0	<0.004	
802411	P0001-AS09-1002	FS	664.9	100	. 8	0.004	10.2	0.006	

**ANALYST:** 

A. YOHN

REVIEWED BY:

All .

- \* Sample results listed above are not blank-corrected.
- Results pertain only to the items tested.
- \* This report does not constitute endorsement by AiHA and/or any other U.S. government agencies.
- \* Named analyst may not be sole analyst. Refer to Chain of Custody for additional analysts.
- Sample volumes are calculated from data supplied by the client. Batta Laboratories, Inc. does not accept liability for results
  expressed in fibers per cubic centimeter. Furthermore, Batta Laboratories assumes no responsibility for the accuracy of results
  reflected by the use of improper collection techniques or equipment.
- \* Current YTD intralaboratory Sr value is 0.22. This value may change slightly over time.





A Certified MBE Company

Delaware Industrial Park, 6 Garfield Way, Newark, DE 19713-5817 Tel. (302) 737-3376 Fax (302) 737-5764

Web: http://www.battaenv.com

E-mail: <u>battaenv@battaenv.com</u>

E.P.A. LAB ID # DE 004



A.I.H.A. /NLLAP #100448



**NVLAP** #101032

Page 1 of 1

## CERTIFICATE OF PCM ANALYSIS

Test Method: NIOSH 7400, Issue 2: 15 August 1994

Report Date:

11/5/2014

#### Sampling Data

BLI Project#: **Project Name:** 

L6888J

WESTON SOLUTIONS-RFP NO. 303-EP-S2-14-01

10/13/14

Date Sampled: Sampled By: Date Analyzed:

CLIENT 10/16/14

#### **Analytical Parameters**

Effective Filter Area ( mm 2):

Graticule Field Area( mm 2):

0.00785

Lab Sample #	Client Sample # Sample Type Sample			Fields	Fibers	Detection	Test Results		
			Valume(L)			Limit(F/cc)	F/mm <sup>2</sup>	F/cc	
803185	FB-101314-001	FB	0	100	<5.5	N/A	<7.0	N/A	
803186	PAS01-101314	FS	548.8	100	<5.5	0.005	<7.0	<0.005	

ANALYST:

JUDY XU

REVIEWED BY:

- \* Sample results listed above are not blank-corrected.
- Results pertain only to the items tested.
- This report does not constitute endorsement by AIHA and/or any other U.S. government agencies.
- Named analyst may not be sole analyst. Refer to Chain of Custody for additional analysts.
- Sample volumes are calculated from data supplied by the client. Batta Laboratories, Inc. does not accept liability for results expressed in fibers per cubic centimeter. Furthermore, Batta Laboratories assumes no responsibility for the accuracy of results reflected by the use of improper collection techniques or equipment.
- Current YTD intralaboratory Sr value is 0.22. This value may change slightly over time.





A Certified MBE Company

Delaware Industrial Park, 6 Garfield Way, Newark, DE 19713-5817 Tel. (302) 737-3376 Fax (302) 737-5764

CERTIFICATE OF PCM ANALYSIS

Test Method: NIOSH 7400, Issue 2: 15 August 1994

Web: http://www.battaenv.com

E-mail: battaenv@battsenv.com

E.P.A. LAB ID: # DE 004



A.I.H.A. /NLLAP #100448



NVLAP #101032

### Sampling Data

BLI Project#:

L6888J

Project Name:

WESTON SOLUTIONS-RFP NO. 303-EP-S2-14-01

Report Date:

Page 1 of 1 10/28/2014

Date Sampled: Sampled By: 10/23/14 CLIENT

Date Analyzed: 10/27/14

**Analytical Parameters** 

Effective Filter Area ( mm 2):

385

Graticule Field Area( mm 2):

0.00785

<del></del>						Ottation of 1610	wood into 1.	0.00100
Lab Sample #	Client Sample #	Sample Type	Sample Volume(L)	Fields	Fibers	Detection Limit(F/cc)	Test Res	sults
···					· .		F/mm <sup>2</sup>	F/cc
803546	FB-102314-001	FB	0	100	<5.5	N/A	<7.0	N/A
803547	PAS01-102314	FS	496.1	100	<5.5	0.005	<7.0	<0.005

**ANALYST:** 

JUDY XU

**REVIEWED BY:** 



- \* Sample results listed above are not blank-corrected.
- \* Results pertain only to the items tested.
- \* This report does not constitute endorsement by AIHA and/or any other U.S. government agencies.
- \* Named analyst may not be sole analyst. Refer to Chain of Custody for additional analysts.
- \* Sample volumes are calculated from data supplied by the client. Batta Laboratories, Inc. does not accept liability for results expressed in fibers per cubic centimeter. Furthermore, Batta Laboratories assumes no responsibility for the accuracy of results reflected by the use of improper collection techniques or equipment.
- \* Current YTD intralaboratory Sr value is 0.22. This value may change slightly over time.



#### **BATTA**

## BATTA LABORATORIES, INC.

A Certified MBE Company Delaware Industrial Park - 6 Garfleki Way - Newark, DE 19713-5817 (302) 737-3376 - Fax (302) 737-5764 E-mail: battaenv@battaenv.com

SAMPLE SUMMARY REPORT

E.P.A. LAB ID# DE004



AJJH.A./NLLAP #100448

NVLAP #101032

Prep Method: NIOSH 7402 (Issue 2: 15 August 1994)

A Distribution from the contract of the contra

Page 1 of 2

Revision#:

COC#:

MULTIPLE

MULTIPLE

Batch #:

**Analytical Data** 

Date Prepped: MULTIPLE

**General Information** 

BLI Project #: L6888J

Project Name: WESTON SOLUTIONS, INC. - RFP# 303

Date Sampled: MULTIPLE

Sampled by:

Test Method: NIOSH 7402 (Issue 2: 15 August 1994)

CLIENT

Sampling Location: PR OLEFINS REMOVAL/SITE 0001-0005

Date Received: MULTIPLE

Report Date:

MULTIPLE

Note: Results provided in this summary report do not have to agree with those obtained from the EPA NADES EDD report.

Primary Filter Area (mm²):

Sample ID and Prep Information

2nd Filter Area (mm2): Prepped By: JX/ARY

Media: MCF Date Analyzed: MULTIPLE Grid Area (mm²): 0.0094

Analyzed By: JX/ARY

Analytical Data Results

	· · · · · · · · · · · · · · · · · · ·		~~~~~			<u></u>				1100010	
Lab Sample	Field	Sample	Dilution	Air Volume (L)	# of Grid Openings	Total # of Asb. by TEM	Asbestos	Target	Reported	Reported Air	Reported
Number	Sample	QA Type-	Factor	PCM Fields	Area Analyzed (mm²)	Asb. Fiber Ratio	Mineral Type	Sensitivity	Sensitivity	Concentration	Filter Density
	Number	Prep Type		PCM Fibers	Total # of TEM PCME Fibers	Vcc by PCM	Detected	(fice)	(fice)	(fice)	(f/mm²)
	FB-100214-	FIELD		0	40	0.0					
802412	001	BLANK	1	100	0.3760	0.000	NON-	0.00500	ŃA	N/A	< 7.00637
		DIRECT		0.5	0.0	N/A	DETECTED		1-11,	,	1,00007
•	LOTB-	LOT		0	40	0	*****			<del></del>	
802413	100214-001	BLANK '	. 1	100	0.3760	0.000	NON-	0.00500	N/A	N/A	< 7.00637
	100017001	DIRECT		0	0.0	N/A	DETECTED			1411	1.00007
	P0001-AS04-	FIELD		621.72	40	0	) total				·
802414	093014	SAMPLE	. 1	100	0.3760.	0.000	NON- DETECTED	0.00600	0.00165	< 0.00434	< 7.00637
		DIRECT		4.5	0.0	< 0.004.	DETECTED			-777.0-	- 1.00001
	P0001-AS05-	FIELD		620.58	40	0	NON-				• • • • • • • • • • • • • • • • • • • •
802415	093014	SAMPLE	1	100	0.3760	0.000	DETECTED	0.00500	0.00166	< 0.00435	< 7.00637
		DIRECT		1	0.0	< 0.004	DETECTED				
	P0001-AS06-	FIELD		606,33	40	0	NON-			*-	
802416	093014	SAMPLE	1	100	0.3760	0.000	DETECTED	0.00500	0.00169	< 0.00445	< 7.00637
		DIRECT		7.5	0.0	0.006	DETECTED				1.0000
	P0001-AS07-	FIELD	•	599.88	40	G	NON-				
802417	100214	SAMPLE	1	100	0.3760	0.000	DETECTED	0.00500	0.00171	< 0.00450	< 7.00637
		DIRECT		3.5	V.0	< 0.004	DETECTED				
*****	P0001-AS08-	FIELD		600.04	40	0	NON-		· · · · · · · · · · · · · · · · · · ·	<del></del>	
802418	100214	SAMPLE	. 1	100	0.3760	0.000	DETECTED	0.00500	0.00171	< 0.00450	< 7.00637
		DIRECT		4	0.0	< 0.004	DETECTED			*******	
	P0001-AS09-	FIELD		664.93	40	0	NON-		· ·	· · · · · · · · · · · · · · · · · · ·	······································
802419	100214	SAMPLE	1	100	0.3760	0.000	DETECTED	0.00500	0.00154	< 0.00406	< 7.00637
		DIRECT		8	0.0	0.006	Defected				
	FB-101314-	FIELD		<u> </u>	40	0	NON-				
803187	001	BLANK	1	100	0.3760	0.000	DETECTED	0.00600	N/A	N/A	< 7.00637
	<del></del>	DIRECT		<u> </u>	0.0	N/A	DETECTED				
	PAS01-	FIELD		548.8	40	0	NON-			-	
803188	101314	SAMPLE	1	100	0.3760	0.077	DETECTED	0.00500	0.00187	< 0.00492	< 7.00637
		DIRECT		2 .	6.5	< 0.005	DETECTED				

Note: Reported Sensitivity is calculated based on the actual number of asbestos fibers detected in TEM. Asb. (asbestos) Fiber Ratio is the ratio of the number of asbestos over the total number of fibers detected in TEM.

Reviewed By:

Analyst(s):

1. LA: Libby Amphibole; AC: Actinofite; TR: Tremotite; CH: Chrysotite; CR: Crocklotite; AN: Anthophylite; AM: Amoetie

2. Indirect sample prep is based on ISO 13794:1998(E): Amblent air-Determination of asbestos fibers-Indirect-transfer transmission electron microscopy method. Refer to sample prep sheets for dilution details. 3. Some samples may be analyzed and/or prepped by multiple instruments, analysis, or on multiple dates. Please refer to the sample prep sheets and analytical benchsheets for details

4. This summary report may not included all information submitted by effects. Furthermore, Batta will not be responsible for results that are due to improper sample collection and inaccurate data provided by clients.

5. This summary report precedes all electronic versions of any kinds, including copies in full or in part.

6. This summary report does not constitute enforsement by NVLAP and/or any other U.S. government agencies. The test data pertain only to the items tested. No assumptions or conclusions should be made to materials or samples not analyzed.



**General Information** 

Date Sampled: MULTIPLE

Primary Filter Area (mm²): 385

BLI Project #: L6888J

**Analytical Data** 

Revision#:

COC#:

Batch #:

MULTIPLE

MULTIPLE

Project Name: WESTON SOLUTIONS, INC. - RFP# 303

Sampled by:

einstruments.

2nd Filter Area (mm²):

Test Method: NIOSH 7402 (Issue 2: 15 August 1994)

CLIENT

N/Α

**BATTA** 

BATTA LABORATORIES, INC.

A Certified MBE Company

Delaware Industrial Park - 6 Garfield Way - Newark, DE 19713-5617 (302) 737-3376 - Fax (302) 737-5764

Web: www.battaenv.com E-mail: battaenv@battaenv.com

SAMPLE SUMMARY REPORT

Sampling Location: PR OLEFINS REMOVAL/SITE 0001-0005

Media: MCE

Note: Results provided in this summary report do not have to agree with those obtained from the EPA NADES EDD report.

Grid Area (mm2): 0.0094

NVLAP #101032 Page 2 of 2 Prep Method: NIOSH 7402 (Issue 2: 15 August 1994) (Pigg) Programme (Pigg) Date Received: MULTIPLE Report Date: MULTIPLE

E.P.A. LAB ID# DE004

AJ.H.A./NLLAP

#100448

Date Prepped:	MULTIPLE	P	repped By	:JX/ARY	0	ate Analyzed:	MULTIPLE	,	-	Analyzed I	By: JX/ARY	
	Sample ID and	l Prep Inform	nation			Analytica	al Data			Results		
Lab Sample	Field	Sample	Dilution	Air Volume (L)	, # of Grid Openings	Total # of Asb. by TEM	Asbestos	Target	Reported	Reported Air	Reported	
Number	'Sample Number	QA Type- Prep Type	Factor	PCM Fields	Area Analyzed (mm²)	Asb. Fiber Ratio	Mineral Type	Sensitivity	Sensitivity	Concentration	Filter Density	
<del>100.000</del>				PCM Fibers	Total # of TEM PCME Fibers	lics by PCM	Detected	(f/cc)	(ffcc)	(f/cc)	(f/mm²)	
803548	FB-102314-	FIELD		0	40	0.0	NON-					
603348	001	BLANK	1	100	0.3760	0.000	DETECTED	0.00500	N/A	N/A	< 7.00637	
	PAS01-	FIELD	· · · · · · · · · · · · · · · · · · ·	496.09	40	N/A 0				· · · · · · · · · · · · · · · · · · ·		
803549	102314	SAMPLE	1	100	0.3760	1,000	NON- DETECTED	0.00500	0.00206	< 0.00544	< 7.00637	
		DIRECT		4	0.5	< 0.005	DETECTED				~ 1.00031	

Note: Reported Sensitivity is calculated based on the actual number of asbestos shers detected in TEM. Astr. (asbestos) Fiber Ratio is the ratio of the number of asbestos over the fotal rumber of fibers detected in TEM

Reviewed By:

Analyst(s):

1. LA: Libby Amphibole; AC: Actinolite; TR: Tremolite; CH: Chrysotile; CR: Cracidolite; AN: Anthophylite; AN: Amosite

2. Indirect cample prop is based on ISO 13794:1999(E); Ambient air-Determination of asbestos fibers-indirect-transfer transmission electron microscopy method. Refer to sample prep sheets for dilution

3. Some samples may be analyzed and/or prepped by multiple instruments, analysis, or on multiple dates. Please refer to the sample prep sheets and analytical bench sheets for details,

4. This summary report may not included all information submitted by clients. Furthermore, Balta will not be responsible for results that are due to improper sample collection and inaccurate data provided by clients.

5. This summary report precedes all electronic versions of any kinds, including copies in full or in part.

6. This summary report does not constitute endorsement by NVLAP and/or any other U.S. government agencies. The test data pertain only to the items tasted. No assumptions or conclusions should be made to materials or samples not analyzed.



#### BATTA LABORATORIES, INC.

A Certified MBE Company

Delaware industrial Park - 6 Garfield Way - Newark, DE 19713-5817 (302) 737-3376 - Fax (302) 737-5764 Web: htpp://www.battaenv.com E-mail battaenv@battaenv.com E.P.A. LAB |D# DE004



A.I.H.A./NLLAP #100448



Page 1 of 1

Report Date: 10/6/2014

#### **CERTIFICATE OF TEM ANALYSIS**

NIOSH 7402, Asbestos by TEM

Sampling Data

**BLi Project#:** 

L6888J

10/4/14

Project Name: Date Sampled:

Date Prepped:

Weston Solutions

9/30 & 10/2/2014

Sampling Location: SITE 0001-0005

Sampled By: CLIENT

Date Received: 10/3/14

**Analytical Data** 

Effective Filter Area (mm²): 385

Media: MCE Prepped By: JX/AY

Date Analyzed: 10/4/2014

Pore Size (µm): 0.45

Grid Area (mm²): 0.0094

Analyzed By: AY

		Cilen	t-Supplied Data	······	***************************************	Ana	ilytical Data			Results
Lab Sample #	Client Sample #	Sample Type	Sample Location	Sample Volume (L)	PCM (fibers/cc)	PCM (f/mm²)	TEM Total Fibers (f/cc)	Limit of Detection (f/cc)	Reported Result * (ffcc)	Asbestos Types Detected
802412	FB- 100214- 001	FIELD BLANK	N/A	0	N/A	0.64	N/A	N/A	N/A	None Detected
802413	LOTB- 100214- 001	LOT BLANK	N/A	0	N/A	0.00	N/A	N/A	N/A	None Detected
802414	P0001- AS04- 093014	FIELD SAMPLE	N/A	621.72	0.004	5.73	0.000	0.004	< 0.004	None Detected
802415	P0001- AS05- 093014	FIELD SAMPLE	N/A	620.58	0.001	1,27	0.000	0.004	< 0.004	None Detected
802416	P0001- AS06- 093014	FIELD SAMPLE	N/A	606,33	0.006	9.55	0.000	0.004	< 0.004	None Detected
802417	P0001- AS07- 100214	FIELD SAMPLE	N/A	599.88	0.003	4.48	0.000	0.004	< 0.004	None Detected
802418	P0001- AS08- 100214	FIELD SAMPLE	N/A	600.04	0.003	5.10	0.000	0.004	< 0.004	None Detected
802419	P0001- AS09- 100214	FIELD SAMPLE	N/A	664.93	0.006	10,19	0.000	0.004	< 0.004	None Detected

<sup>\*</sup>Reported result is expressed as f/cc Asbestos in the Visible Range.

**PCM Analyst** 

TEM Analyst

Results periain only to the items lested. Lab is not responsible for results expressed in fice, which are calculated from volumes supplied by the client. This report may not be duplicated in part without written permission from BATTA Laboratories.

<sup>&</sup>quot;This sample batch contains sample(s) that have volumes below 400L. According to NIOSH 7402, samples with volumes under 400L should not be analyzed by this method.



### BATTA LABORATORIES, INC.

A Certified MBE Company

Delaware industrial Park - 6 Garfield Way - Newark, DE 19713-5817 (302) 737-3376 - Fax (302) 737-5764

Web: htpp://www.battaenv.com E-mail battaenv@battaenv.com **E.P.A. LAB ID# DE004** 



A.I.H.A./NLLAP #100448



Page 1 of 1

Report Date: 10/17/2014

### CERTIFICATE OF TEM ANALYSIS

NIOSH 7402, Asbestos by TEM

Sampling Data

BLi Project#:

L6888J

**Project Name: Date Sampled:**  WESTON SOLUTIONS - PR OLEFINS REMOVAL

10/13/2014

Sampling Location: SITE# 0001-0005

Sampled By: CLIENT

Date Received: 10/15/14

**Analytical Data** 

Effective Filter Area (mm²): 385

Media: MCE

Pore Size (µm): 0.80

Grid Area (mm²): 0.0090

Date Prepped: 10/16/14 Prepped By: JX Date Analyzed: 10/16/2014 Analyzed By: JX **Client-Supplied Data** Analytical Data Results Client Sample **TEM Total** Lab Sample Sample Volume PCM PCM Fibers Limit of Reported **Asbestos Types** Sample # Туре Sample Location (fibers/cc) (f/mm²) (f/cc) Detection (f/cc) Result \* (f/cc) Detected FB-803187 101314-AIR NA 0 N/A 0.00 N/A N/A N/A None Detected 001 PAS01-803188 AIR NA. 548.8 0.002 2.55 0.013 0.005 101314 < 0.005 None Detected

**PCM** Analyst

J. XU

**TEM Analyst** 

Reviewed By:

Results perialn only to the items tested. Lab is not responsible for results expressed in fice, which are calculated from volumes supplied by the client. This report may not be duplicated in part without written permission from BATTA Laboratories.

<sup>\*</sup> Reported result is expressed as I/cc Asbestos in the Visible Range.

<sup>\*\*</sup>This sample batch contains sample(s) that have volumes below 400L. According to NIOSH 7402, samples with volumes under 400L should not be analyzed by this method.



#### BATTA LABORATORIES, INC.

A Certified MBE Company

Delaware Industrial Park - 6 Garfield Way - Newark, DE 19713-5817 (302) 737-3376 - Fax (302) 737-5764 Web: htpp://www.battaenv.com E-mail battaenv@batteenv.com E.P.A. LAB ID# DE004



A.I.H.A./NLLAP #100448

Page 1 of 1

#101032

CERTIFICATE OF TEM ANALYSIS

NIOSH 7402, Asbestos by TEM

Sampling Data

BLI Project #:

Project Name: Date Sampled:

WESTON SOLUTION-RR OLEFINS REMOVAL

Sampling Location: RR OLEFINS REMOVAL Sampled By: CLIENT

Date Received: 10/24/14

Report Date: 10/28/2014

**Analytical Data** 

Effective Filter Area (mm²): 385 Date Prepped:

10/27/14

Prepped By: JX

Media: MCE

Pore Size (um); 0.80

Grid Area (mm²): 0.0090

Date Prepp	ed:	10/27/14	Pre	pped By:	JX		-	Date Analyzed:	10/27/2014	Analyzed By: JX
		Citen	t-Supplied Data			An	alytical Data			Results
Lab Sample#	Client Sample	Sample Type	Sample Location	Sample Volume (L)	PCM (fibers/cc)	PCM (f/mm²)	TEM Total Fibers (Øcc)	Limit of Detection (f/cc)	Reported Result * (f/cc)	Asbestos Types Detected
803548	FB- 102314- 001	TEM	NA .	0	N/A	2.55	N/A	N/A	N/A	None Detected
803549	PAS01- 102314	TEM	NA	496.09	0.004	5.10	0.001	0.005	< 0.005	None Detected

**PCM Analyst** 

J. XU

**TEM Analyst** 

Reviewed B

Results pertain only to the items tested. Lab is not responsible for results expressed in fice, which are calculated from volumes supplied by the client. This report may not be duplicated in part without written permission from BATTA Laboratories.

<sup>\*</sup> Reported result is expressed as f/cc Asbestos in the Visible Range.

<sup>\*\*</sup>This sample batch contains sample(s) that have volumes below 400L. According to NIOSH 7402, samples with volumes under 400L should not be analyzed by this method.

## FIELD COC

DateShipped: 10/2/2014 CarrierName: FedEx USEPA

CHAIN OF CUSTODY RECORD Site #: 0001-0005

Contact Name: Smita Sumbaly

Contact Phone: 732-585-4410

No: 2-100214-00010005-0001 Cooler #: 001

Lab Phone: 302-737-3376 Lab: Batta environmental Associates, Inc.

Lab#	Lab#   Sample#	Location Analyses	Analyses	Matrix	-	Sample Time	Sum to Court	Volume	Vol Units	Volume Vol Units Total_Time	Avg_Flow	Flow_Units
21420	FB-100214-001	DustTrak .	Asbestos (PCM&TEM)	Ąŗ	10/2/2014	14:55	-		Liters	-		L/min
¥	LOTB-100214-001	DustTrak	Asbestos (PCM&TEM)	Air	10/2/2014	14:50	₩.		Liters			Limin
かき	P0001-A804-093014	DustTrak 1 Asbestos (PCM&TE	Asbestos (PCM&TEM)	Air	9/30/2014	14:30	<b>4</b> -	621.72 Liters	Liters	240	2,5905	L/min
37	P0001-A806-093014	DustTrak 2		Air	9/30/2014	14:21	-	620.58	Liters	231	2.6865	L/min
3	P0001-AS06-093014	DustTrak 3	DustTrak 3 Asbeatos (PCM&TEM)	Air	9/30/2014	14:22	Į.	606,33	Liters	232	2.6135	L/min
5	P0001-AS07-100214	DustTrak 1	DustTrak 1 Asbestos (PCM&TEM)	Air	10/2/2014	14:30	1	599,88	Liters	240	2.4995	L/min
<u>48</u>	P0001-AS08-100214	Dust Trak 2 Asbestos (PCM&TE	iM)	Air	10/2/2014	14:32	1	600,04	Liters	242	2,4796	L/min
1 1 1	P0001-A809-100214	Dustrak 3 Asbestos (PCM&TE	iM)	Air	10/2/2014	14,35	-	664.93 Liters		245	2.714	L/min
						~_						
					The second secon							

Special Instructions: Total Sampling time units in minutes Provide TWA calculations. Turnaround time 72 hrs. RFP# 303

YSM PAC.

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY#

Time	·		
Date Time			
Received by	-		
Date			
Relinguished By			
Received by Date Time Items/Reason Relinquished By Date			
Fime	(380)		-
Date	०००। नग्रध्य		
Received by	1214 - ZIMNOS		
Date	m/r/ot:	11,	,
Relinquished by	Carlos flust		
ms/Reason	1 Junst	•	

Date Shipped: 10/13/2014 AirbillNo: 800093579288 CarrierName: FedEx USEPA

CHAIN OF CUSTODY RECORD PR Olefins Removal Contact Name: Smita Sumbaly Contact Phone: 732-585-4410

No: 2-401314-00010005-0001

Lab: Batta environmental Associates, Inc.

Coaler #: 001

Lab Phone: 302-737-3376

		<del></del>		-		· -		,		··	,	<del>,</del>		_	•
Flow_Units	lim'	L/min													
Avg_Flow		2.461													
Volume Voi Units Total_Time Avg_Flow Flow_Units		223				-							-		
Vol Units	Liters														
1		548.8 Liters													
Numb Cont	*	-						,							
Sample Time	14:31	14:31													
Collected	10/13/2014	10/13/2014													
Matri	Αţ	¥									,				
Analyses	Asbestos (PCM&TEM)	Asbestos (PCM&TEM)	-						,						
Location	FB-101314-001 DustTraksArea Asbestos (PCM&TEM)	DustTraksArea													
Sample #	FB-101314-001	PAS01-101314			,							.:			
-ab #	18182						•								

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY# TEM FOR SOC Special Instructions: Total Sampling time units in minutes. Provide TWA calculations. Turnaround time 72 hrs. RFP#: 303

tems/Reason	Refindulshed by (Signature and Organization)	ganizationly Date/Time	Received by (Signature and Organization) Date/Time Sample Condition Upon Receipt	Date/Time	Sample Condition Upon Receipt
411-most	Ame / Med /	10-13-14	10-13-14 SomiaMi. FAMA UROSANORIAS IdISIN PROSO	idishi4e1020	Pocephece
,	At. C			-	
	-				

USEPA

Date Shipped: 10/23/2014 CarrierName: FedEx

AirbilNo: 800093579279

Lab#

84828

P35549

CHAIN OF CUSTODY RECORD

PR Olefins Removal

Contact Name: Smita Sumbaly

Contact Phone: 732-585-4410

No: 2-102314-00010005-0001 Cooler #: 001

Lab Phone: 302-737-3376 Lab: Batta erwironmental Associates, Inc.

Flow\_Units L/min Ľmiri Avg\_Flow 2.111 Total\_Time 8 Vol Units E BETS Lifers 496.09 Volume Numb Sample Time 13:45 13:45 10/23/2014 10/23/2014 Collected Ą Ą Asbestos (PCM&TEM) Asbestos (PCM&TEM) Analyses DustTraksArea **DustTraksArea** Location PAS01-102314 FB-102314-Sample #

TYM LOC. Special Instructions: Total Sampling time units in minutes. Provide TWA calculations. Turnaround time 72 hrs. RFP#: 303

CHAIN OF CUSTODY#

SAMPLES TRANSFERRED FROM

			•
Date/Time Sample Condition Upon Receipt			
Date/Time	्छ। भित्रका	-	
Received by (Signature and Organization)	Operation		
Date/Time	10-23-14 Open		-
Relinquished by (Signature and Organization)			
Items/Reason	All traust		